

**RECEIVED  
CENTRAL FAX CENTER**

Application Number 10/599134  
Response to the Office Action dated 02/06/2008

MAY 05 2008

**REMARKS**

Favorable reconsideration of this application is requested in view of the following remarks.

Claim 1 has been rejected under 35 U.S.C. 102(b) as being anticipated by Mitsui et al. (US Patent Application Publication No. 2003/0129546). Applicants respectfully traverse this rejection.

Mitsui discloses use of inorganic powders in order to form the dielectric paste (see para. 0069). However, the reference merely discloses compositions using silicone oxide ( $\text{SiO}_2$ ), bismuth oxide ( $\text{Bi}_2\text{O}_3$ ), boron oxide ( $\text{B}_2\text{O}_3$ ), and zinc oxide ( $\text{ZnO}$ ) in a wide range of a concentration of each component (see Table in para. 0058) but does not disclose or suggest the specific composition including other components that claim 1 require (see paras. 0105-0108 and Table 3). For example, the table in para. 0058 does not include aluminum oxide and RO, both of which claim 1 also requires. In addition, among the actual embodiments, powder A does not include  $\text{Bi}_2\text{O}_3$  and RO, and the concentration of  $\text{ZnO}$  is lower than the required range of claim 1; powder B does not include RO, and concentrations of  $\text{Bi}_2\text{O}_3$  and  $\text{ZnO}$  do not satisfy the required concentrations of claim 1; powder C does not include RO and  $\text{ZnO}$ , and the concentrations of  $\text{SiO}_2$ ,  $\text{B}_2\text{O}_3$ , and  $\text{Bi}_2\text{O}_3$  do not satisfy the requirements of claim 1; and powder D does not include  $\text{Bi}_2\text{O}_3$  (see paras. 0105-108). In addition, each of examples 1-16 and comparative examples 1-3 use only either powder A or B (see Table 3). The reference does not teach that the components of these various embodiments are readily interchangeable. Thus, the reference does not disclose or lead one of ordinary skill toward the composition required by claim 1. Therefore, claim 1 is distinguished from Mitsui, and accordingly, this rejection should be withdrawn.

Claims 2-4 have been rejected under 35 U.S.C. 103(a) as being unpatentable as obvious over Mitsui et al. (US Patent Application Publication No. 2003/0129546) in view

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of Kosaka et al. (US Patent No. 6,207,268). Applicants respectfully traverse this rejection.

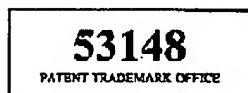
As discussed above, claim 1 and accordingly claims 2-4 are distinguished from Mitsui because Mitsui discloses neither the specific composition of the low-melting-point glass powder that claim 1 requires nor testing results that shows actual use of the specific composition including Bi<sub>2</sub>O<sub>3</sub> and RO and sufficient amount of ZnO. The examples in Mitsui use powder A or B both of which do not include including Bi<sub>2</sub>O<sub>3</sub> and RO and sufficient amount of ZnO (see Table 3 and paras. 105-106).

Kosaka merely suggests use of SiO<sub>2</sub>, Bi<sub>2</sub>O<sub>3</sub>, ZnO, B<sub>2</sub>O<sub>3</sub>, and PbO but discloses neither a specific composition including these components nor the particular concentrations of these components in the composition as claim 1 requires (see "Glass frit" in tables of examples and comparative example 1). In addition, the reference merely lists CaO and BaO ("RO") together with other inorganic powders (see coln. 10, lines 15-24) and does not disclose concentrations of RO in the composition or actual use of RO in examples. Therefore, Kosaka does not remedy the deficiencies of Mitsui.

Accordingly, this rejection should be withdrawn. Applicants do not concede the correctness of the rejection.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.

Respectfully submitted,



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Dated: May 5, 2008

DPM/my/ad

## PATENT COOPERATION TREATY

PCT/JP2005/018359

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rule 44bis.3(c) and 72.2)

To:

KAMADA, Koichi  
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19.5.01

|  |  |
|--|--|
| Date of mailing (day/month/year)<br>19 April 2007 (19.04.2007) | To:  |
| Applicant's or agent's file reference:<br>P040152P0            | <b>IMPORTANT NOTIFICATION</b>  |
| International application No.<br>PCT/JP2005/018359             | International filing date (day/month/year)<br>04 October 2005 (04.10.2005) |
| Applicant<br>MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. et al    |  |

**1. Transmittal of the translation to the applicant.**

- The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).
- The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

**2. Transmittal of the copy of the translation to the designated or elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Masashi Honda

**PATENT COOPERATION TREATY**  
**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
 (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

|  |  |  |                  |
|--|--|--|------------------|
| Applicant's or agent's file reference<br>P040152PO   | <b>FOR FURTHER ACTION</b>  |  | See item 4 below |
| International application No.<br>PCT/JP2005/018359   | International filing date (day/month/year)<br>04 October 2005 (04.10.2005) | Priority date (day/month/year)<br>07 October 2004 (07.10.2004) |                  |
| International Patent Classification (8th edition unless older edition indicated)<br>See relevant information in Form PCT/ISA/237 |  |  |                  |
| Applicant<br>MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.  |  |  |                  |

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.
3. This report contains indications relating to the following items:
- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report   |
| <input type="checkbox"/> Box No. II           | Priority  |
| <input type="checkbox"/> Box No. III          | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV           | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI           | Certain documents cited   |
| <input type="checkbox"/> Box No. VII          | Certain defects in the international application  |
| <input type="checkbox"/> Box No. VIII         | Certain observations on the international application   |
4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).

|   |  |
|---|--|
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland | Date of issuance of this report<br>11 April 2007 (11.04.2007)        |
| Facsimile No. +41 22 338 82 70  | Authorized officer<br><br>Masashi Honda<br>e-mail: pt08.pct@wipo.int |

Form PCT/IB/373 (January 2004)

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

|     |
|-----|
| To: |
|-----|

*TRANSLATION*  
**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

|   |   |   |
|---|---|---|
|   |   | Date of mailing<br>(day/month/year)                 |
| Applicant's or agent's file reference<br><b>P040152PO</b>                         |   | FOR FURTHER ACTION<br>See paragraph 2 below         |
| International application No.<br><b>PCT/JP2005/018359</b>                         | International filing date (day/month/year)<br><b>04.10.2005</b> | Priority date (day/month/year)<br><b>07.10.2004</b> |
| International Patent Classification (IPC) or both national classification and IPC |   |   |
| Applicant<br><b>MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.</b>                      |   |   |

## 1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

## 3. For further details, see notes to Form PCT/ISA/220.

|  |                                    |                    |
|--|------------------------------------|--------------------|
| Name and mailing address of the ISA/JP | Date of completion of this opinion | Authorized officer |
| Facsimile No.                          |                                    | Telephone No.      |

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
**PCT/JP2005/018359**

| Box No. I   | Basis of this opinion |
|---|-----------------------|
| <p>1. With regard to the language, this opinion has been established on the basis of:</p> <p><input checked="" type="checkbox"/> the international application in the language in which it was filed</p> <p><input type="checkbox"/> the translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rule 12.3(a) and 23.1(b)).</p>   |                       |
| <p>2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:</p> <p>a. type of material</p> <p><input type="checkbox"/> a sequence listing</p> <p><input type="checkbox"/> table(s) related to the sequence listing</p> <p>b. format of material</p> <p><input type="checkbox"/> on paper</p> <p><input type="checkbox"/> in electronic form</p> <p>c. time of filing/furnishing</p> <p><input type="checkbox"/> contained in the international application as filed</p> <p><input type="checkbox"/> filed together with the international application in electronic form</p> <p><input type="checkbox"/> furnished subsequently to this Authority for the purposes of search</p> |                       |
| <p>3. <input type="checkbox"/> In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.</p>   |                       |
| <p>4. Additional comments:</p> <p> </p> <p> </p>  |                       |

| WRITTEN OPINION OF THE<br>INTERNATIONAL SEARCHING AUTHORITY   |        | International application No.<br>PCT/JP2005/018359 |     |
|---|--------|--|-----|
| Box No. V Reasoned statement under Rule 43bis.1(e)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement   |        |  |     |
| 1. Statement  |        |  |     |
| Novelty (N)   | Claims | 2-4  | YES |
|   | Claims | 1  | NO  |
| Inventive step (IS)   | Claims |  | YES |
|   | Claims | 1-4  | NO  |
| Industrial applicability (IA)   | Claims | 1-4  | YES |
|   | Claims |  | NO  |
| 2. Citations and explanations:  |        |  |     |
| <p>Document 1: JP 11-60274 A (Nippon Electric Glass Co., Ltd.), 02 March 1999, Claims 1, 5; Paragraphs 0002, 0014</p> <p>Document 2: JP 2002-33053 A (NEC Corp.), 31 January 2002, Claims 1, 4; Paragraphs 0006, 0010</p> <p>Document 3: JP 2001-48577 A (Nippon Electric Glass Co., Ltd.), 20 February 2001, Claim 1; Paragraphs 0001, 0013, 0035, 0036</p>  |        |  |     |
| <p><b>Claim 1</b></p> <p>The invention of claim 1 does not appear to be novel or involve an inventive step according to document 1 cited in the ISR.</p> <p>Document 1 describes a glass composition whose scope overlaps the glass composition described in claim 1 of the present application as a dielectric layer forming material for a plasma display panel (claims 1 and 5, paragraphs 0002 and 0014).</p>   |        |  |     |
| <p><b>Claim 2</b></p> <p>The invention of claim 2 does not appear to involve an inventive step according to document 1 and document 2 cited in the ISR.</p> <p>Document 2 describes the matter of providing an MgO protecting layer for protecting the dielectric layer of a plasma display panel (claims 1 and 4, paragraphs 0006 and 0010), and the matter of providing an MgO protecting layer to cover the dielectric layer described in document 1 would be easy for a person skilled in the art.</p>  |        |  |     |
| <p><b>Claim 3</b></p> <p>The invention of claim 3 does not appear to involve an inventive step according to documents 1 and 2 as well as document 3 cited in the ISR.</p> <p>The coefficient of linear thermal expansion of a glass forming a dielectric layer is not specified in document 1.</p> <p>However, document 3 describes a glass composition which is the same type as the glass composition described in document 1 as a dielectric layer forming material for a plasma display panel (claim 1, paragraphs 0013 and 0001), and states that the coefficient of linear thermal expansion of this glass composition is approximately <math>75 \times 10^{-7}</math> to <math>80 \times 10^{-7}</math> °C (tables 1 and 2).</p> |        |  |     |

## WRITTEN OPINION OF THE

INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/018359

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Also, since the glass compositions are the same, this examination finds that the thermal characteristics which are the glass characteristics must be the same, and predicts the coefficient of linear thermal expansion of the glass described in document 1 to be approximately  $75 \times 10^{-7}$  to  $80 \times 10^{-7}$  °C.

**Claim 4**

The invention of claim 4 does not appear to involve an inventive step according to documents 1-3.

Document 3 describes the matter of forming a dielectric layer by firing a paste containing glass powder, a solvent, a resin, and the like after applying it so as to cover electrodes (paragraphs 0035 and 0036), and adopting the method described in document 3 as the method of forming the dielectric layer described in document 1 would be easy for a person skilled in the art.